Title: SEMANTIC RESPONSE TO LOCK REQUESTS TO REDUCE COHERENCE OVERHEAD IN MULTI-NODE SYSTEMS Inventor(s): Sashikanth Chandrasekaran, et al.; Docket No. 50277-1763; Response to Office Action dated 3/29/05 REPLACEMENT SHEET 3/8 302 308 GET SHARED LOCK ON BRANCH BLOCK 304 RELEASE LOCK IS CHILD <u>ON PARENT</u> BLOCK A LEAF OR 306 **BRANCH BLOCK** CHILD IS BRANCH BLOCK **GET SHARED** LOCK ON BLOCK CHILD IS LEAF BLOCK -310 GET EXCLUSIVE LOCK ON LEAF BLOCK 312 RELEASE LOCK ON PARENT 316 READ LEAF BLOCK 324 320 Y RELEASE LOCK IS LEAF BLOCK **BEFORE WAITING TO** MARKED FOR SPLIT RE-ATTEMPT LATER Ν 330 334 N IS LEAF BLOCK **INSERT KEY VALUE FULL** 340 MARK LEAF BLOCK FOR SPLIT **END** 344 RELEASE LOCK OF LEAF BLOCK GET EXCLUSIVE LOCK ON PARENT BLOCK 348 350 **MODIFY PARENT** FIG. 3 GET EXCLUSIVE LOCK ON LEAF BLOCK 356 360 CREATE NEW LEAF BLOCK PRIOR ART 364 MODIFY LEAF BLOCK